

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

		Application Number	10/656,911
		Filing Date	September 4, 2003
		First Named Inventor	Jeffery A. Whiteford
		Group Art Unit	Unassigned
		Examiner Name	Unassigned
Total Number of Pages in This Submission	8	Attorney Docket Number	40-003300US

ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Assignment Papers (for an Application)	<input type="checkbox"/> After Allowance Communication to Group
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment / Response	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition Routing Slip (PTO/SB/69) and Accompanying Petition	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input checked="" type="checkbox"/> Additional Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> receipt acknowledgment postcard
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Small Entity Statement	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Response to Missing Parts/ Incomplete Application	Authorization to Charge Deposit Account Please charge Deposit Account No. 50-0893 for any additional fees associated with this paper or during the pendency of this application, including any extensions of time for consideration of the documents enclosed.	
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	Remarks	

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Angela P. Horne, Ph.D., Reg. No. 41,079, Quine Intellectual Property Law Group, P.C.
Signature	<i>Angela P. Horne, PhD</i>
Date	February 13, 2004

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Typed or printed name	Deborah Berwick		
Signature	<i>Deborah Berwick</i>	Date	February 13, 2004



FEB 17 2004

I hereby certify that this correspondence is being deposited with the United States Postal Service first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450, on February 13, 2004

QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C.

By Deborah Berwick
Deborah Berwick

Attorney Docket No. 40-003300US
Client Ref. No. 01-003300US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Jeffery A. Whiteford, et al.

Application No.: 10/656,911

Filed: September 4, 2003

For: ORIENTED NANOSTRUCTURES
AND METHODS OF PREPARING

Examiner: Unassigned

Art Unit: Unassigned

INFORMATION DISCLOSURE
STATEMENT UNDER 37 CFR § 1.97 and
§ 1.98

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO-1449 are being called to the attention of the Examiner. Copies of the references are enclosed. It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.



Jeffery A. Whiteford, et al.
Application No.: 10/656,911
Page 2

Applicant believes that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action on the merits per 37 CFR 1.97(b)(3). However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 50-0893. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

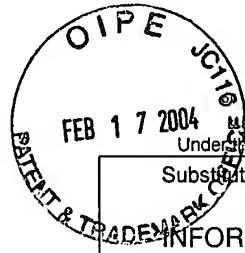
Respectfully submitted,

Angela P. Horne, Ph.D.

Angela P. Horne, Ph.D.
Reg. No. 41,079

QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C.
P.O. BOX 458
Alameda, CA 94501
(510) 337-7871
Fax (510) 337-7877

APH:db



FEB 17 2004

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A-B/PTO

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

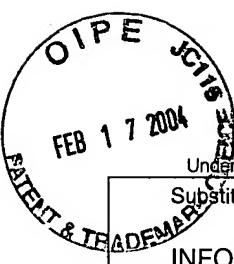
Application Number	10/656,911
Filing Date	September 4, 2003
First Named Inventor	Jeffery A. Whiteford
Group Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	40-003300US
Date Submitted	February 13, 2004

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
1	5,196,396			Lieber	03-23-1993	
2	5,230,957			Lin	07-27-1993	
3	5,252,835			Lieber et al.	10-12-1993	
4	5,274,602			Glenn	12-28-1993	
5	5,505,928			Alivisatos et al.	04-09-1996	
6	5,537,000			Alivisatos et al.	07-16-1996	
7	5,640,343			Gallagher et al.	06-17-1997	
8	5,690,807			Clark Jr. et al.	11-25-1997	
9	5,751,018			Alivisatos et al.	05-12-1998	
10	5,897,945			Lieber et al.	04-27-1999	
11	5,990,479			Weiss et al.	11-23-1999	
12	5,997,832			Lieber et al.	12-07-1999	
13	6,036,774			Lieber et al.	03-14-2000	
14	6,048,616			Gallagher et al.	04-11-2000	
15	6,128,214			Kuekes et al.	10-03-2000	
16	6,136,156			El-Shall et al.	10-24-2000	
17	6,159,742			Lieber et al.	12-12-2000	
18	6,190,634	B1		Lieber et al.	02-20-2001	
19	6,198,655	B1		Heath et al.	03-06-2001	
20	6,207,229	B1		Bawendi et al.	03-27-2001	
21	6,225,198	B1		Alivisatos et al.	05-01-2001	
22	6,239,355	B1		Salafsky	05-29-2001	
23	6,306,736	B1		Alivisatos et al.	10-23-2001	
24	6,322,901	B1		Bawendi et al.	11-27-2001	
25	6,413,489	B1		Ying et al.	07-02-2002	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



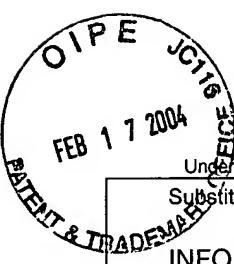
Substitute for form 1449A-B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>		Complete if Known	
		Application Number	10/656,911
		Filing Date	September 4, 2003
		First Named Inventor	Jeffery A. Whiteford
		Group Art Unit	Unassigned
		Examiner Name	Unassigned
		Attorney Docket Number	40-003300US
		Date Submitted	February 13, 2004

FOREIGN PATENT DOCUMENTS							
Examiner Initials	Cite No.	Foreign Patent Document			Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)			
	26	WO	96/29629	A2	President and Fellows of Harvard College	09-26-1996	
	27	WO	01/03208	A1	President and Fellows of Harvard College	01-11-2001	
	28	WO	02/080280	A1	The Regents of the University of California	10-10-2002	
	29	WO	02/17362	A2	President and Fellows of Harvard College	02-28-2002	
	30	WO	02/48701	A2	President and Fellows of Harvard College	06-20-2002	
	31	WO	03/005450	A2	President and Fellows of Harvard College	01-16-2003	
	32	WO	03/009827	A1	Microban Products Company	02-06-2003	
	33	WO	03/009991	A1	John P. Fouster L.L.C	02-06-2003	
	34	WO	03/27847	A1	Motorola, Inc.	04-03-2003	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T
	35	BACHTOLD ET AL. (2001) "Logic Circuits with Carbon Nanotube Transistors." <u>Science</u> 294:1317-1320.		
	36	BJORK ET AL. (2002) "One-dimensional Steeplechase for Electrons Realized" <u>Nano Letters</u> 2(2):86-89.		
	37	CAO ET AL. (2000) "Growth and properties of semiconductor core/shell nanocrystals with InAs cores" <u>Journal of the American Chemistry Society</u> 122:9692-9702.		
	38	CAULDER ET AL. (2001) "Design, Formation and Properties of Tetrahedral M ₄ L ₄ and M ₄ L ₆ Supramolecular Clusters." <u>Journal of the American Chemistry Society</u> 123:8923-8938.		
	39	CHEN ET AL. (1999) "Observation of a Large On-Off Ratio and Negative Differential Resistance in an Electronic Molecular Switch" <u>Science</u> 286:1550-1552.		
	40	CHUNG ET AL. (2000) "Si Nanowire Devices" <u>Applied Physics Letters</u> 76(15):2068-2070.		

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



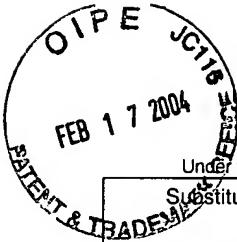
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A-B/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>		Application Number	10/656,911
		Filing Date	September 4, 2003
		First Named Inventor	Jeffery A. Whiteford
		Group Art Unit	Unassigned
		Examiner Name	Unassigned
		Attorney Docket Number	40-003300US
		Date Submitted	February 13, 2004

41	COLLIER ET AL. (1999) "Electronically Configurable Molecular-Based Logic Gates." <u>Science</u> 285:391-394.
42	COLVIN ET AL. (1992) "Semiconductor Nanocrystals Covalently Bound to Metal Surfaces with Self-Assembled Monolayers." <u>Journal of the American Chemistry Society</u> 114:5221-5230.
43	CUI ET AL. (2000) "Doping and electrical transport in silicon nanowires" <u>Journal of Physical Chemistry B</u> 104(22): 5213-5216.
44	CUI ET AL. (2001) "Diameter-controlled synthesis of single-crystal silicon nanowires." <u>Applied Physics Letters</u> 78(15): 2214-2216.
45	DABBOUSI ET AL. (1997) "(CdSe)ZnS core-shell quantum dots: Synthesis and characterization of a size series of highly luminescent nanocrystallites." <u>Journal of Physical Chemistry B</u> 101:9463-9475.
46	DERYCKE ET AL. (2001) "Carbon Nanotube Inter- and Intramolecular Logic Gates." <u>Nano Letters</u> 1(9): 453-456.
47	DUAN ET AL. (2000) "General synthesis of compound semiconductor nanowires" <u>Advanced Materials</u> 12:298-302.
48	GREENHAM ET AL. (1996) "Charge separation and transport in conjugated-polymer/semiconductor-nanocrystal composites studied by photoluminescence quenching and photoconductivity." <u>Physical Review B-Condens Matter</u> 54(24): 17628-17637.
49	GUDIKSEN ET AL. (2000) "Diameter-selective synthesis of semiconductor nanowires <u>Journal of the American Chemistry Society</u> 122:8801-8802.
50	GUDIKSEN ET AL. (2001) "Synthetic control of the diameter and length of single crystal semiconductor nanowires" <u>Journal of Physical Chemistry B</u> 105:4062-4064.
51	GUDIKSEN ET AL. (2002) "Growth of nanowire superlattice structures for nanoscale photonics and electronics." <u>Nature</u> 415:617-620.
52	HUANG ET AL. (2001) "Logic Gates and Computation from Assembled Nanowire Building Blocks." <u>Science</u> 294:1313-1317.
53	HUANG ET AL. (2003) "From 1D chain to 3D network: Tuning hybrid II-VI nanostructures and their optical properties." <u>Journal of the American Chemistry Society</u> 125:7049-7055.
54	HUANG ET AL. (2001) "Directed Assembly of One-Dimensional Nanostructures Into Functional Networks" <u>Science</u> 291:630-633
55	HUYNH ET AL. (2002) "Hybrid Nanorod-Polymer Solar Cells." <u>Science</u> 295:2426-2427.
56	HUYNH ET AL. (1999) "CdSe Nanocrystals Rod/Poly (30hexylthiophene) Composite Photovoltaic Devices." <u>Advanced Materials</u> 11(11): 923-927.
57	JUN ET AL. (2001) "Controlled synthesis of multi-armed CdS nanorod architectures using monosurfactant system." <u>Journal of the American Chemistry Society</u> 123:5150-5151.

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<p>Substitute for form 1449A-B/PTO</p> <p>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p>(use as many sheets as necessary)</p>		Complete if Known	
		Application Number	10/656,911
		Filing Date	September 4, 2003
		First Named Inventor	Jeffery A. Whiteford
		Group Art Unit	Unassigned
		Examiner Name	Unassigned
		Attorney Docket Number	40-003300US
Date Submitted	February 13, 2004		

	58	KONG ET AL. (1998) "Synthesis of Individual Single-Walled Carbon Nanotubes on Patterned Silicon Wafers." <u>Nature</u> 395: 878-881.
	59	KONG ET AL (1998), "Chemical Vapor Deposition of Methane for Single-Walled Carbon Nanotubes" <u>Chemical Physics Letters</u> 292:567-574.
	60	LEININGER ET AL. (2000) "Self-Assembly of Discrete Nanostructures Mediated by Transition Metals." <u>Chem. Rev.</u> 100:853-908.
	61	LIU ET AL. (2001) "Sol-Gel Synthesis of Free-Standing Ferroelectric Lead Zirconate Titanate Nanoparticles." <u>Journal of the American Chemistry Society</u> 123:4344-4345.
	62	MANNA ET AL. (2000) "Synthesis of Soluble and Processable Rod-, Arrow-, Teardrop-, and Tetrapod-Shaped CdSe Nanocrystals." <u>Journal of the American Chemistry Society</u> 122:12700-12706.
	63	MANNA ET AL. (2002) "Epitaxial growth and photochemical annealing of graded CdS/ZnS shells on colloidal CdSe nanorods" <u>Journal of the American Chemistry Society</u> 124:7136-7145.
	64	MORALES ET AL. (1998) "A laser ablation method for the synthesis of crystalline semiconductor nanowires." <u>Science</u> 279:208-211.
	65	PENG ET AL. (1997) "Epitaxial growth of highly luminescent CdSe/CdS core/shell nanocrystals with photostability and electronic accessibility." <u>Journal of the American Chemistry Society</u> 119:7019-7029.
	66	PENG ET AL. (2000) "Shape control of CdSe nanocrystals." <u>Nature</u> 404:59-61.
	67	PUNTES ET AL. (2001) "Colloidal nanocrystal shape and size control: The case of cobalt." <u>Science</u> 291:2115-2117.
	68	SCHENNING ET AL. (2002) "Supramolecular Organization of α , α' -Distributed Sexithiophenes." <u>Journal of the American Chemistry Society</u> 124:1269-1275.
	69	SCHÖN ET AL. (2001) "Field-Effect Modulation of the Conductance of Single Molecules." <u>Science</u> 294:2138-2140.
	70	SCHÖN ET AL. (2001) "Self-assembled monolayer organic field-effect transistors." <u>Nature</u> 413:713-716.
	71	SERVICE (2001), "Assembling Nanocircuits From the Bottom Up." <u>Science</u> 293: 782-785
	72	SHIMAZAKI ET AL. (1998) "Preparation and Characterization of the Layer-by-Layer Deposited Ultrathin Film Based on the Charge-Transfer Interaction in Organic Solvents." <u>Langmuir</u> 14:2768-2773.
	73	STOCKTON AND RUBNER (1997) "Molecular-Level Processing of Conjugated Polymers. 4. Layer-By-Layer Manipulation of Polyaniline via Hydrogen-Bonding Interactions." <u>Macromolecules</u> 30:2717-2725.
	74	SU AND MRKSICH (2002) "Using Mass Spectrometry to Characterize Self-Assembled Monolayers Presenting Peptides, Proteins, and Carbohydrates." <u>Angew. Chem. Int Ed.</u> 41(24): 4715-4718.

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Substitute for form 1449A-B/PTO

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known	
Application Number	10/656,911
Filing Date	September 4, 2003
First Named Inventor	Jeffery A. Whiteford
Group Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	40-003300US
Date Submitted	February 13, 2004

75	THESS ET AL. (1996) "Crystalline Ropes of Metallic Carbon Nanotubes." <u>Science</u> 273: 483-487.
76	TSENG AND ELLENBOGEN (2001) "Toward Nanocomputers." <u>Science</u> 294: 1293-1294.
77	URBAN ET AL. (2002) "Synthesis of single-crystalline perovskite nanorods composed of barium titanate and strontium titanate." <u>Journal of the American Chemistry Society</u> 124(7): 1186-1187.
78	WU ET AL. (2002) "Block-by-block growth of single-crystalline Si/SiGe superlattice nanowires." <u>Nano Letters</u> 2(2): 83-86.
79	YUN ET AL. (2002) "Ferroelectric Properties of Individual Barium Titanate Nanowires Investigated by Scanned Probe Microscopy." <u>Nano Letters</u> 2(5): 447-450.
80	ZHOU ET AL. (1997) "Nanoscale Metal/Self-Assembled Monolayer/Metal Heterostructures." <u>Applied Physics Letters</u> 71:611-613.

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.